

FLUX SWITCHING LINEAR MOTOR

Abstract of the Disclosure

A flux-switching linear motor with at least two phases P1, P2, P3 has a moving rig, two permanent magnets 9, 10 and a switching mechanism. The moving rig 1 has at least two field coils 7. Each field coil 7 surrounds a magnetic armature 8 defining moving magnetic poles. The two permanent magnets 9, 10 are magnetized in opposite directions, transverse to the axis of a guidance stator tube 1. The stator tube 1 has magnetic poles 2 disposed along at least one of its walls so as to be successively facing the moving magnetic poles during the travel of the moving rig. The switching mechanism switches the direction of the current in the coils. The permanent magnets 9, 10 are disposed outside the coils and magnetized along an axis parallel to the axis of the coil. The stator magnetic poles include pieces 2 made of magnetic material fixed in a guidance tube made of amagnetic material. The dimension of the magnets as measured along their magnetic axis is chosen so as to create narrow gaps to allow movement of the magnets past the stator poles.